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ABSTRACT

This paper discusses 10 reasons why outdoor education research needs more and better methods and measures. These reasons encompass the following areas of discussion: (1) the researcher's theories and values influence the research methods and measures chosen; (2) measurement must be relevant to the phenomenon measured, and multilevel phenomena may require multiple measures; (3) outdoor education research abounds with small quick projects, and the field would benefit from longitudinal studies and in-depth case studies; (4) outdoor education research must move beyond a linear cause and effect model to more complex analysis of dynamic relationships and multiple variables and contexts; (5) the increasing diversity of participants may require varied methods and measures and result in new insights and perspectives; (6) process orientations and group-based studies provide a further dimension that goes beyond the tendency to focus on program content and output; (7) collaborative styles of research empower both subjects and researchers and increase understanding of the situation; (8) multiple methods, both qualitative and quantitative, exist for research; (9) outdoor education research journals and other means of sharing information among researchers are needed; and (10) many critical issues exist in outdoor education and must be identified, but a holistic outlook is also necessary. (SV)

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METHODS, MEASURES, AND MADNESS: POSSIBILITIES FOR OUTDOOR EDUCATION RESEARCH

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METHODS, MEASURES, AND MADNESS: POSSIBILITIES FOR OUTDOOR EDUCATION RESEARCH

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At the 1993 National Recreation and Park Association Leisure Research Symposium, Peter Witt, of Texas A & M University, told a joke about the two people in a restaurant. One remarked that the food wasn't very good and the other said, "Besides that, there isn't much of it." He used this analogy to talk about research on the social psychology of leisure. The analogy might be a way to start our discussion about the methods and measures that we have employed in outdoor education research. Our methods and measures aren't very good and there haven't been very many of them. This double lack may account for some of the "madness" that we might feel. Some of the strengths and problems in outdoor education research are similar to problems with social science research in general, but we must continue to think about what is unique to this field of outdoor education. In the course of this discussion, we want to address the strengths of the measures and methods we use, and the challenges that we face in the future.

A number of strengths can be identified in the outdoor education research. We have isolated aspects of the individual experience in outdoor education. We have been interdisciplinary in our research and have borrowed theory and methods relatively successfully from other disciplines like sociology, psychology, and education. We have begun to isolate variables that help us describe the outcomes of outdoor education. Our intentions have been honorable, and we have been sincere and genuine in our efforts to understand outdoor education experiences. The number of outdoor education researchers has been small, but those of us who have made outdoor education and the concomitant research associated with it our life's work, have been honest and hardworking. Progress has been made toward better understanding outdoor education research, and we have made efforts to share this information with practitioners and participants in our programs.

With the work that has been done, however, many new challenges have emerged as we address research in outdoor education for the end of this century. We have identified the "Top Ten Reasons Why We Need More and Better Outdoor Education Research Methods and Measures" as the basis for our further discussion.

1. Theories/Values Influence Research Methods and Measures

Because our currently held theories and values impact what we do with research, we must be aware of the directions that our research may take. Values express a standard of what is desirable. Our scholarship in outdoor education should reflect our basic values related to knowledge. We need to make visible our assumptions about how we know and share our knowledge. We submit that the phenomena of the new physics and the implications of the new identity politics reflects an ever increasing world with multiple realities. Positivism and survey methods have reflected one specific reality that has been and is relevant to outdoor education. On the other hand, other perspectives will allow us to investigate and understand other levels of reality that we have not captured in one perspective or set of values.

Our values and world views shape the way we do research; they frame our ques-

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tions and include or exclude according to categories and criteria. For example, if a researcher subscribes to feminist or critical theory, the research will likely focus on women or other "marginalized people" and assess the social-power context of the research topic. If you subscribe to empowerment for individuals, you would likely focus on doing collaborative research with informants so that even the process of research provides a change for the informants.

2. *Measurement Must be Relevant*

Measuring any phenomenon is problematic because of the metaphoric nature of measurement and the interaction of the researcher and the object or individual to be researched. The basic metaphors of space or territory, proxemic relations among points within a space, a straight line, a curved line, and the gamble all permeate quantitative measurement strategies. What much of statistics turns out to be is an attempt to estimate how well some set of data approximate a metaphor. "It is amazing, for instance, how many statistical techniques reduce to testing the fit of some set of data to an imaginary straight line passing at some angle among imaginary points through an imaginary space...The act does not involve discovering order in human nature but in creating and applying an idea which turns out to approximate some aspect of nature or human nature" (Sykes, 1966).

In addition, the new physics is underscoring the fact that reality is co-created and we are able to measure certain results because the phenomenon responds according to our questions or instruments. So, before measurement we cannot describe a fixed spin to the electron. We only know that when we measure it, it will respond to the axis we choose to measure (Wheatley, 1993).

We have few good reliable and valid instruments to use in measuring various outcomes or processes that we have historically associated with outdoor education. We need to look beyond the numerical metaphor to other metaphors of text, pictures, and human movement. We also need to entertain how we have found what we looked for and how we can see complementary but opposite issues and different perspectives related to different contexts. Further, in many situations, we need to use multiple measures if we are to determine what is really happening in multi-level phenomenon.

3. *Long-Term and In-Depth Studies Are Valuable*

Much of the outdoor education research done might be labeled as "quick and dirty." Due to funding situations, tenure and promotion requirements, and our lack of knowledge of alternative methods, we have done many small, convenience sample, quick studies. Long-term and longitudinal studies and the use of systematically applied case studies may offer further opportunities in the future.

Related to this reason is the need for individuals to do long-term and in-depth studies as a part of the research career. As an individual focuses upon central themes, replicates and modifies the research over time, the individual begins to develop an in-depth understanding of the phenomenon related to outdoor education. This in-depth and long-term research career has benefits related to facilitating the process of research and relationships between informants, researchers, and practitioners, and prepares us for the "quantum leaps" within research where you find surprises and unseen connections that only come with familiarity with the literature, subject, research, and phenomenon.

4. *The Challenge of Analysis*

For research to move forward in any area, the challenge of analysis is critical. Our descriptive research provides only the starting point for understanding a phenomena such as what happens to people in the outdoors. The focus of any measurement should result in a careful analysis of what the outcomes mean in relation to other literature, to other situations, or to theoretical development in general. If we do not have good instruments, this critical analysis may be difficult, but, nevertheless, we need to strive for it all.

Further, the challenge in outdoor education research is to move beyond a linear

cause and effect model to a more complex picture that includes dynamic relationships, multiple variables and contexts, and ever-changing dynamics. We have often been fascinated with structures, true answers, past practices, and outcomes and have ignored or missed the constant changing forms and temporariness of solutions. Like streams that have more than one response to rocks, we need to look at the various ways we accomplish our purposes and move in directions using transient forms. The vital characteristics of our programs are the ability to renew themselves continuously and to regulate the process in such a way that the integrity of the structure is maintained as it changes forms and adapts.

5. *The Diversity of Participants*

Indirectly related to methods and measures, but an important component to successful research in the future, is the consideration of the diversity of the individuals and groups that we research. The multicultural society (defined in the very broadest way) is something that we must consider in applying methods and measures. The diversity of the population may mean that techniques and instruments that we once thought were valid may not be appropriate in all situations in the future. By studying a group of individuals who have not been studied in the past, we may gain new insights into what is being done with other individuals or groups. Acknowledging diversity also allows us to reassess our own frameworks and ways of knowing (Sampson, 1993).

6. *Process Orientations and Group-Based Studies Provide a Further Dimension*

Research in outdoor education has tended to focus on output and content rather than the process and what it says about us. Further, although we have done a good job examining individuals, a methodological challenge of the future is to examine social units such as small groups as well. McAvoy and his colleagues (1992) suggested that very little research has been done on groups within the field of outdoor education.

The underlying assumption that we can add information and examples to our existing body of information to be inclusive has been questioned by numerous scholars (e.g., Lerner, 1975; Sampson, 1993). This accommodative, add-on strategy not only fails to hear the missing voices but exacerbates the very issues raised by the voices of others. If we continue to maintain our structures of knowledge, we will implicitly represent a particular point of view, that of currently dominant social groups. As we do this, we act as though our own voice is neutral, reflecting reason, rationality, and with its ever expanding collection of data, perhaps truth itself. A discourse that transforms the very foundation of dominant ideals can only be remedied through material dialogue with others. Such a value will necessitate different research strategies such as collaborative styles.

7. *Collaborative Styles of Research Will Open Doors*

Collaborative styles would enhance and empower practitioners, subjects, and researchers because of the involvement, connection, and communication they would allow. In collaborative research the people studied make decisions about the study format and data analysis. This model is designed to create social and individual change by altering the role relations of people involved in the project (Reinharz, 1992). The researcher adopts an approach of openness, reciprocity, mutual disclosure, and shared risk to achieve this egalitarian relation. Lather (1988) described the emancipatory effect of such approaches through formulating research designs that change people by encouraging self-reflection and a deeper understanding of their situations in the world. Because this task is political, and because our tradition has taught us that knowledge about outdoor education must be separate from the political, we will need to reconsider a separation that sustains the privilege of some at the expense of the many. Our failure to be responsive to the claims of people who seek their own voices in outdoor education will also undermine our legitimacy.

8. *Multiple Methods Exist for Research*

We must continually remind ourselves of the possible methodological and measurement options we have for doing outdoor

education research. We also have to be open to new and more expansive ways of thinking about planning studies, collecting data, and doing a critical and theoretical analysis of the meaning of the data. Perhaps research techniques and strategies exist that we have not even considered for application to outdoor education research. As in other areas of research, the interpretive paradigm is offering new ways of understanding human experiences. We have few good studies that use qualitative data effectively, but we need to expand the paradigms and measures available. Not only are we challenged by examining emerging qualitative approaches, but within the positivist tradition, we ought to consider the appropriate use of experimental designs and the linking of methods and techniques.

9. *To Create a Demand for Research Publications*

A further challenge is to share with others the methods and measures that we use. It seems to us in the field of outdoor education that we have spent a lot of time reinventing the wheel, or going in circles. Because we do not have the best ways to communicate the findings of our research studies, we often do not have the benefit of learning from one another's insights and (sometimes) mistakes. Thus, a challenge is to develop systems for sharing (like these *Proceedings*) and other publications that will enable us to build on one another's research, so that we are not operating in a vacuum.

Related to this reason is the need to publish in other disciplines and "spread the word" about outdoor education. In the same way, as researchers we must learn what other disciplines have to say to us about a better understanding and better methods and measures applied to outdoor education.

10. *Many Critical Issues Exist in Outdoor Education*

A final challenge is to identify the critical research issues in the field. Many issues exist, but we need to address the most important with our research. The fragmentation of the study of outdoor education has resulted in the picture that we have dabbled here, dabbled there, without a comprehensive picture of where we are after all these years of research. We need to look continually at how each study that is done fits into a bigger picture.

We see numerous issues in the world around us from the implications of the new physics to social issues such as an aging population, youth violence and crime, and the further distancing between the "have" and the "have-not" countries. We need to examine how we create a future where outdoor recreation can flourish and provide the vital connections between people and the natural world. Our focus should be on what is effective and what actions might serve us better. Our power will need to be grounded in building relationships among ourselves, among researchers, between researchers and practitioners, with participants, and with other disciplines. It logically follows that some of our work will be to address methodological and philosophical issues and create strategies for making our voice visible in other disciplines. To that end, we might consider the following guideposts:

1. We must remain aware of the whole and resist analyzing the parts to death. We need to look for patterns of movement over time and focus on qualities such as connectedness, flow, direction and shape;
2. We must look for ways to hold seemingly opposite parameters in focus or within peripheral visions, rather than drawing all or nothing conclusions;
3. We must resist the temptation to argue over what is real and true and look for how each perspective gives us windows on a complex reality;
4. We must look for structures that facilitate relationships and expect something useful when we link people, even though we cannot predict the outcomes;
5. We must develop ways to research and live truly knowing that the universe does not cooperate with our desires for determination (Wheatley, 1993).

Related to critical issues is the need also to address the social relevance of the research that we do. How does outdoor educa-

tion contribute to making the world a better place? Can we identify the relevant social issues that outdoor education can help to address?

Conclusions

These "Top Ten Reasons Why We Need More and Better Outdoor Education Research Methods and Measures" are offered as preliminary thinking about how methods and measures can be used to avoid madness in outdoor education research. These are suggestions we can consider and use as they are appropriate in further research.

Frustration and "madness" can overtake us when we feel that we aren't making any progress toward addressing the challenges we face. Csikszentmihalyi (1992) defined flow as the congruence between one's skill level and the challenge of an activity or opportunity. Anxiety results when the challenge is beyond our skill level. Some of us may feel anxious about the research that lies ahead. In the future, however, we will need to work together and share our concerns, failures, and successes, as well as educate ourselves about better methods and measures that may help us answer some of the critical questions and find flow in our research.

The term "madness" lends itself to ambiguity. We see it as a positive and joyful process to be "madly in love" or "mad about someone." Therefore, the "madness" may be our source of energy as we re-commit ourselves to the vision and values within our own life commitments to outdoor education and the benefits we experience at a purely human level. In physics, scientists have begun to describe space not as emptiness, but as containing fields or spatial structures that can result in action-at-a-distance. So, for instance, gravity is a field rather than a force and causes results in space far from the initial point of the field. We can see our vision for outdoor education research as a field. We can then do our best to articulate that vision so it permeates not only our associations and organizations, but other disciplines, practitioners, and students.

With the time and resources we have available, we will need to seek appropriate methods and measures that result in expanding the body of knowledge about education in, for, and about the outdoors. We also will need to think critically about what our research means in the context of the broader society and use the tools that are available to make a difference in the quality of people's lives and in the quality of the environment.

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